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EXAMINER

BLACKWELL, JAMES H

ART UNIT

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

09/631,101

Applicant(s)

GUNN ET AL.

Examiner

James H. Blackwell

Art Unit

2176

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 09 April 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-56,83-85,96-106,130-133,136-139 and 142-189 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 96-104,142-154 and 185-188 is/are allowed.
- 6) ☒ Claim(s) See Continuation Sheet is/are rejected.
- 7) ☒ Claim(s) See Continuation Sheet is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 August 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

Continuation of Disposition of Claims: Claims rejected are 1,2,4,5,7-9,12,14-25,30,32-34,38-41,46-56,83-85,105-106,155,160-165,167-174,176-180 and 189.

Continuation of Disposition of Claims: Claims objected to are 3,6,10-11,13,26-29,31,35-37,42-45,130-133,136-139,156-159,166,175 and 181-184.

### **DETAILED ACTION**

1. This Office Action is in response to an amendment filed 04/04/2007 citing the Examiner's agreement to withdraw the previous Office Action mailed 01/05/2007.
2. The original priority date is **03/18/1999**.
3. Claims 1-56, 83-85, 96-106, 130-133, 136-139, and 142-189 are pending.
4. Claims 1, 47, 83-85, 96, 155, and 189 are independent claims.

### ***Allowable Subject Matter***

5. Claims 96-104, 142-154, and 185-188 are allowed.
6. Claims 3, 6, 10-11, 13, 26-29, 31, 35-37, 42-45, 130-133, 136-139, 156-159, 166, 175, and 181-184 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
7. Claims 161-162, 165, and 167-170 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims, and the rejections based on 35 U.S.C. 112, second paragraph are overcome.

### ***Claim Objections***

8. Claim 166 is objected to because of the following informalities: recommended amendments to the claim language are listed below.

166. The system of Claim 164, wherein the means for obtaining [[a]] the second plurality of completion candidates is based on the selected completion candidate and displaying the second set of completion candidates in the search list for further selection, wherein if the user input signal corresponds to selecting a completion candidate from the search list to initiate further searching, the system further comprises means for initiating further searching when a completion candidate in the search list remains selected for a predetermined time limit.

These amendments are recommended in order to clarify the claim language to make it more readable.

9. Applicant is advised that should claims 160, 161 and 162 be found allowable, claims 164, 169 and 170 will be objected to under 37 CFR 1.75 as being substantial duplicates of claims 160, 161 and 162, respectively. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

***Claim Rejections - 35 USC § 112***

10. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

11. Claim 7 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Line 3 of Claim 7 contains the phrase "in a direction associated." Lines 3-4 contain the phrase "without the pointing device necessarily moving towards". These two phrases are contradict one another since you cannot both be moving the pointing device towards a completion candidate and then not move it. This contradiction renders Claim 7 indefinite.

12. Claims 161 and 162 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In particular, Line 2 in each of Claims 161 and 162 contains the phrase "completion candidates". However, Claim 155, from which Claims 161 and 162 depend, recites a "first plurality of completion candidates" (limitation (b)), and a "second plurality of completion candidates" (Lines 2-3, limitation (f)). It is unclear as to which set of completion candidates the phrase in Line 2 of Claims 161 and 162 refers to, thus rendering Claims 161 and 162 indefinite.

13. Claim 165 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In particular, Line 2 in Claim 165 contains the phrase "completion candidates". However, Claim 155, from which Claim 165 ultimately depends, recites a "first plurality of completion candidates" (limitation (b)), and a "second plurality of completion candidates" (Lines 2-3, limitation (f)). It is unclear as to which set of completion candidates the phrase in Line 2 of Claim 165 refers to, thus rendering Claim 165 indefinite.

14. Claim 167 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In particular, Line 2 in Claim 167 contains the phrase "completion candidates". However, Claim 155, from which Claim 167 depends, recites a "first plurality of completion candidates" (limitation (b)), and a "second plurality of completion candidates" (Lines 2-3, limitation (f)). It is unclear as to which set of completion candidates the phrase in Line 2 of Claim 167 refers to, thus rendering Claim 167 indefinite.

15. Claim 168 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In particular, Line 4 in Claim 168 contains the phrase "completion candidates". However, Claim 155, from which Claim 168 depends, recites a

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“first plurality of completion candidates” (limitation (b)), and a “second plurality of completion candidates” (Lines 2-3, limitation (f)). It is unclear as to which set of completion candidates the phrase in Line 4 of Claim 168 refers to, thus rendering Claim 168 indefinite.

16. Claims 169 and 170 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In particular, Line 2 in each of Claims 169 and 170 contains the phrase “completion candidates”. However, Claim 155, from which Claims 169 and 170 depend, recites a “first plurality of completion candidates” (limitation (b)), and a “second plurality of completion candidates” (Lines 2-3, limitation (f)). It is unclear as to which set of completion candidates the phrase in Line 2 of Claims 169 and 170 refers to, thus rendering Claims 169 and 170 indefinite.



***Claim Rejections - 35 USC § 102***

17. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

18. Claims 1-2, 4-5, 7-9, 12, 14-24, 30, 32-34, 38-41, 46-56, 83-85, 105-106, 155, 160, 163-164, 171-174, 176-180, and 189 are rejected under 35 U.S.C. 102(e) as being anticipated by Masui (U.S. Patent No. 5,959,629 filed 11/12/1997, issued 09/28/1999).

**In regard to independent Claim 1, Masui discloses:**

- *A method of processing text entered into a personal computing device with a pointing device* (Title; Abstract; Figs. 1-2, 11; → a text input device and method is which enables efficient and high-speed input of texts in a pen-input computer. A pen-input computer has a liquid crystal display panel, ... a pressure-sensitive tablet and an input pen for performing input to a soft keyboard displayed on the liquid crystal display panel), *the method comprising*:
  - (a) *receiving a partial text entry comprising at least a first character* (Col. 10, lines 34-37; → initial screen, as shown in Fig. 12, if a soft key skF of "F", for example, is pressed by the input pen (arrow A), "F" is designated as a retrieval condition for which completion candidates are later searched).

- (b) *in response to receipt of the first character of the partial text entry, obtaining a dynamically generated list of completion candidates based on the partial text entry* (Col. 10, lines 37-40; → when "F" is thus designated as a retrieval condition, a set of plural candidate words starting with "F" is displayed as a pull-down menu (*a pull-down or pop-up menu is considered a type or kind of list*) PDME on the screen DPY, as shown in Fig. 12);
- (c) *displaying the list of completion candidates in a search list within a graphical user interface* (Col. 10, lines 38-40; → ... a set of plural candidate words starting with "F" is displayed as a pull-down menu (*a pull-down or pop-up menu is considered a type or kind of list*) PDME on the screen DPY, as shown in Fig. 12);
- (d) *receiving a user input signal associated with the pointing device* (Col. 10, lines 46-50; → a desired candidate word is selected with a pointing device (e.g., a pen) from the candidate words displayed in the pull-down menu PDME. For example, if a menu key mkf of "first" is selected, the character "first" is determined, as shown in Fig. 13. The act of selecting with the pen is indicative of a type of input signal with the pointing device);
- (e) *if the user input signal corresponds to a first type of user selection with the pointing device, deactivating the search list* (Col. 10, lines 28-33; Fig. 11; → in the soft keyboard SKBE, alphabetical soft keys of "A" to "Z" (including symbolic characters "(", ")", " ", "#", etc.), and general edit command soft keys SKC including "Back Space", "Enter" and "Cancel" are

provided. Also, Col. 11, lines 13-14;→ in the case where the determined text is to be corrected or erased, the edit command soft keys SKC are used. These two disclosures imply that a user can use such Edit keys to perform functions other than text entry. For example, and with functionality typical of mechanical keyboards used to enter/edit text on a typical computer display, a "Back Space" key would typically be used to delete previous characters. Thus, in the case of the soft keyboard, a user begins with the soft keyboard as shown in Fig. 11. Fig. 12 shows the result of entering the letter "F" with the pointing device by "tapping" the "F" virtual key. It is presumed, like in the mechanical keyboard case, that to remove the entry of the "F" key, a user would simply press the "Back Space", or perhaps the "Cancel" soft key and the display would revert back to that depicted in Fig. 11). Likewise, it is implied by the disclosures above of Masui that "tapping" the "Cancel" soft key in Fig. 12 would revert the display back to that of Fig. 11 (i.e., the pull-down or pop-up menu (list) would in effect be deactivated);

- (f) if the user input signal corresponds to a second type of user selection with the pointing device, replacing the partial text entry with a completion candidate from the search list (Col. 10, lines 46-50; Fig. 19, ST11-ST12;→ a desired candidate word is selected with a pointing device (e.g., a pen) from the candidate words displayed as the pull-down menu PDME. For example, if a menu key mkf of "first" is selected, the character "first" is

determined, as shown in Fig. 13. The act of selecting with the pen is indicative of a type of input signal with the pointing device (i.e., a *second type of user selection*));

**In regard to dependent Claim 2, Masui discloses:**

- *if the user input signal corresponds to a third type of user selection with the pointing device, dynamically obtaining a refined list of completion candidates based on one of the completion candidates from the search list, displaying the refined list of completion candidates in the search list for further user selection, and monitoring for a further user input signal associated with the pointing device* (Col. 8, lines 27-34; lines 48-56; line 62 through Col. 9 line 9; Figs. 4-9; → based on the selection of a completion candidate (e.g., "ikani" as in Fig. 7), another set of completion candidates is produced. This set contains completion candidates that most frequently occur immediately after the previously chosen completion candidate. Thus, a refined list of completion candidates is offered and displayed based on the selection of an initial completion candidate from an initial list).

**In regard to dependent Claim 4, Masui discloses:**

- *the user input signal corresponds to the first type of user selection with the pointing device when a button on a mouse is selected (Fig. 32; → an alternative means for a pointing device is a mouse).*

**In regard to dependent Claim 5, Masui discloses:**

- *the user input signal corresponds to the second type of user selection with the pointing device when a gesture is made with the pointing device towards a completion candidate in the search list to select the completion candidate and another user input signal is received indicating acceptance by the user of the completion candidate (Col. 7, lines 56-62; Col. 8, lines 27-34; → if a menu key corresponding to a desired candidate word on the pull-down (or similarly the pop-up) menu is touched with the pen, the candidate word corresponding to the menu key is selected. Thus, the selected candidate word may be inputted. The gesture is interpreted as an implicit part of the selection of a completion candidate).*

**In regard to dependent Claim 7, Masui discloses:**

**Note:** due to the contradictory phrasing (see 112 2<sup>nd</sup> rejection above), this claim is interpreted in a manner similar to that of Claim 5.

- *the user input signal corresponds to the second type of user selection with the pointing device when a gesture is made with the pointing device in a direction*

*associated with a desired completion candidate without the pointing device necessarily moving towards or onto a portion of the graphical user interface where the completion candidate is displayed (Col. 7, lines 56-62; Col. 8, lines 27-34;→ if a menu key corresponding to a desired candidate word on the pull-down (or similarly the pop-up) menu is touched with the pen, the candidate word corresponding to the menu key is selected. Thus, the selected candidate word may be inputted. The gesture is interpreted as an implicit part of the selection of a completion candidate).*

**In regard to dependent Claim 8, Masui discloses:**

- *the user input signal corresponds to the second type of user selection with the pointing device when a motion is made with the pointing device in a particular direction associated with a desired completion candidate for at least a predetermined distance while the pointing device is in an active state and a further action is made with the pointing device to accept the desired completion candidate (Col. 7, lines 56-62; Col. 8, lines 27-34;→ if a menu key corresponding to a desired candidate word on the pull-down (or similarly the pop-up) menu is touched with the pen, the candidate word corresponding to the menu key is selected. Thus, the selected candidate word may be inputted. The gesture is interpreted as an implicit part of the selection of a completion candidate. The pointing device is "active" in the sense that it is being used to select a completion*

candidate, rather than using some other pointing or entry mechanism to perform the selection).

**In regard to dependent Claim 9, Masui discloses:**

- *the user input signal corresponds to the second type of user selection with the pointing device when a completion candidate in the search list is selected to replace the partial text entry (Col. 10, lines 46-50; Fig. 19, ST11-ST12; → a desired candidate word is selected with a pointing device (e.g., a pen) from the candidate words displayed as the pull-down menu PDME. For example, if a menu key mkf of "first" is selected, the character "first" is determined, as shown in Fig. 13. The act of selecting with the pen is indicative of a type of input signal with the pointing device (*a second type of user selection*));*

**In regard to dependent Claim 12, Masui discloses:**

- *the user input signal corresponds to the third type of user selection with the pointing device when a predetermined character or key is selected ((Col. 8, lines 27-34; lines 48-56; line 62 through Col. 9 line 9; Figs. 4-8; → predetermined characters, as in the keyboard characters, can be selected using the pointing device in order to generate completion candidate lists. Also, completion candidates can be selected to choose a particular candidate).*

**In regard to dependent Claim 14, Masui discloses:**

- *preparing to receive a new partial text entry once the partial text entry is replaced with a completion candidate from the search list (see Fig. 19, step ST12;→ specifically, once a completion candidate has been selected, an undetermined character buffer array is cleared to make ready for a new character input. Note, that at step ST10, the user is still entering additional characters to this buffer rather than the buffer being cleared).*

**In regard to dependent Claim 15, Masui discloses:**

- *receiving an end-of-entry signal; and preparing to receive a new partial text entry once the end-of-entry signal is received (see Fig. 19, steps ST11 and ST12;→ the transition from step ST11 to ST12 with a YES response to a completion candidate being determined is and end-of-entry signal. Following that, in step ST12 the buffer containing the partially entered character(s) is cleared making way for a new character(s) to be entered and new candidates retrieved).*

**In regard to dependent Claim 16, Masui discloses:**

- *receiving an end-of-entry signal once a predetermined character or key is selected, and preparing to receive a new partial text entry once the end-of-entry signal is received (see Fig. 19, steps ST11 and ST12;→ the transition from step ST11 to ST12 with a YES response to a completion candidate being determined*



is and end-of-entry signal. Following that, in step ST12 the buffer containing the partially entered character(s) is cleared making way for a new character(s) to be entered and new candidates retrieved. More specifically, in the transition from Figs. 12 to 13 the user selects the word "first" as their choice of completion candidate, which initiates the step ST12 in Fig. 19 to clear the buffer containing the initially entered character "F" and readies the buffer for new partial character input).

**In regard to dependent Claim 17, Masui discloses:**

- *preparing to receive a new partial text entry after the partial text entry is replaced with a completion candidate from the search list, but only if another user input signal is received that corresponds to an express user selection to terminate searching based on the partial text entry (Col. 7, lines 56-62; Fig. 5; → if a menu key corresponding to a desired candidate word on the pop-up menu PUMJ is touched with the pen, the candidate word corresponding to the menu key is selected. Thus, the selected candidate word may be inputted. After the candidate word is selected, the display of the pop-up menu PUMJ is extinguished. At this point, the user is free to enter further partial characters and invoke further completion candidate lists based on the new partial character entry).*

**In regard to dependent Claim 18, Masui discloses:**

- *displaying in the graphical user interface an indication of a currently active entry mode selected from at least one of a keyboard mode and a search mode (see Figs. 12 and 13; → Fig. 12, user “taps” the “f” key and a pull-down or pop-up menu appears with completion candidates (i.e., indicative of an active entry mode with the keyboard and the search modes). Fig. 13 depicts the selection of a completion candidate from the pull-down or pop-up menu of completion candidates, again indicative of an active mode for both the keyboard and search modes).*

**In regard to dependent Claim 19, Masui discloses:**

- *displaying in the graphical user interface a total number of completion candidates in a dictionary that begin with the partial text entry (Col. 14, lines 21-56; → up to N candidates may be displayed, where N in the examples is 10, based on how many candidates can fit on the display pull-down or pop-up menu lists. By visual inspection of the number of candidates appearing, the user can see the total number appearing).*

**In regard to dependent Claim 20, Masui discloses:**

- *if the user input signal corresponds to a fourth type of user selection with the pointing device, changing selections within the search list (Figs. 11-14; Col. 10,*

lines 31-33;→ once candidates are displayed, the user can choose from among any of them. Also, function keys are made available to make corrections to choices ("Back Space", "Cancel") that would provide the user with the means to make corrections or to change their choices).

**In regard to dependent Claim 21, Masui discloses:**

- *if the user input signal corresponds to a fifth type of user selection with the pointing device, pausing without any further processing of the partial text entry or the search list until a new input signal identifying another type of user selection is received* (Figs. 21;→ with respect to "drag processing", step ST33 provides the user with a predetermined amount of time to "tap" a character key (ST31) and release it (ST32). Hence, the user has a period of time in order to pause).

**In regard to dependent Claim 22, Masui discloses:**

- *at least part of the partial text entry is received via a digital keyboard, the method further comprising:*
  - *(a) displaying the digital keyboard in a user interface of the personal computing device when a user is entering text a keystroke at a time; and*
  - (b) monitoring for user input (see Fig. 3;→ represents a display of a digital keyboard on a personal computing device awaiting input);*

**Note:** in limitations (c) and (d), the term "replacing" is broadly interpreted to indicate that the search list (as in Fig. 4), "replaces" the digital keyboard in the

sense that focus is changed from the digital keyboard to the candidate menu (search list).

- *(c) if the user input corresponds to activating the search list, replacing the digital keyboard with the search list and waiting for further user input (see Fig. 4; → indicative of a pull-down menu replacing a digital keyboard and awaiting a user, for example, making a selection of a completion candidate); and*
- *(d) if the user input corresponds to terminating use of the search list once activated, replacing the search list with the digital keyboard and waiting for further user input (Col. 7, lines 33-44; Fig. 4; → releasing the pen extinguishes the pull-down menu in favor of a pop-up menu which, instead of obscuring the digital keyboard as in the pull-down menu, allows the user to see both the digital keyboard un-obscured and the search list as a pop-up menu, which can be located anywhere on the screen).*

**In regard to dependent Claim 23, Masui discloses:**

- *at least part of the partial text entry is received via a digital keyboard (see Fig. 12; → display and use of a digital keyboard for partial text entry);*
- *displaying simultaneously both the digital keyboard and the search list (see Fig. 12; → user “taps” “F” key which brings up a candidate list (pull-down or pop-up menu) and both keyboard and search list appear simultaneously).*

**In regard to dependent Claim 24, Masui discloses:**

- *displaying the list of completion candidates in the search list as soon as they are retrieved by the candidate prediction system (Fig. 12; Col. 10, lines 34-50; → upon “tapping” the “F” key, a list of search candidates is provided).*

**In regard to dependent Claim 30, Masui discloses:**

- *retrieving completion candidates from multiple dictionaries each (dictionary) having their own weight values for completion candidates (Col. 11, line 15 through Col. 12, line 49; Figs. 15-16; → uses word and phrases dictionaries. Display of completion candidates is a function of their “appearance frequency” implying some weighting is used. The number of candidates displayed is also influenced by the number of characters input as is the likelihood of the candidate list containing the desired completion candidate);*
- *generating a final list of completion candidates for display in the search list based on the weight values associated with the completion candidates retrieved from the multiple dictionaries (Col. 11, line 15 through Col. 12, line 49; Figs. 15-16; → display of completion candidates is driven by how closely the candidate words or phrases match the partial text input and also are displayed as a function of appearance frequency).*

**In regard to dependent Claim 32, Masui discloses:**

- *displaying the search list in a fixed location in a graphical user interface (see Fig. 14;→ in the case where a pop-up menu is displaying completion candidates, the list appears to be displayed in a fixed location below the keyboard proper. This is as opposed to the pull-down menu, which appears (see Figs. 12-13) to be displayed in the vicinity of the chosen partial character “F”).*

**In regard to dependent Claim 33, Masui discloses:**

- *at least part of the partial text entry is received via a digital keyboard the method further comprising
  - *displaying the search list docked with the digital keyboard (see Fig. 14;→ in the case where a pop-up menu is displaying completion candidates, the list appears to be displayed in a fixed location below the keyboard proper. This is as opposed to the pull-down menu, which appears (see Figs. 12-13) to be displayed in the vicinity of the chosen partial character “F”. The term “docked” is interpreted to mean “connected to” the digital keyboard, as opposed to being detached as in a separate window).**

**In regard to dependent Claim 34, Masui discloses:**

- *displaying the digital keyboard in response to a user selection, and hiding the digital keyboard in response to another user selection (Fig. 1, item 11;→*

selecting the ON position would allow the digital keyboard to be displayed, while the OFF position would cause the digital keyboard to be hidden. Assumes that the digital keyboard is initially displayed on power up).

**In regard to dependent Claim 38, Masui discloses:**

- *displaying the list of completion candidates in the search list near a last known set of position coordinates for the pointing device (see Fig. 12; → menu list appears near the cursor arrow pointing to the letter "F" on the keyboard).*

**In regard to dependent Claim 39, Masui discloses:**

- *displaying at least one of the completion candidates from the list of completion candidates displayed in the search list near a last known set of position coordinates for the pointing device slightly offset from at least one of an x-axis or y-axis (see Fig. 12 position of cursor arrow A with respect to the menu PDMe).*

**In regard to dependent Claim 40, Masui discloses:**

- *displaying a cursor on a screen that tracks movement with the pointing device (see Figs. 12-13; → transition from Figs. 12 to 13 shows an arrow cursor appearing to coincide with the users selection choice).*

**In regard to dependent Claim 41, Masui discloses:**

- *the cursor is displayed so as to track the movement of the pointing device precisely* (Figs. 12-12; → the cursor arrow A appears to be rather precisely placed on the selected key/button on the keyboard).

**In regard to dependent Claim 46, Masui discloses:**

- *a computer-readable medium having stored instructions for use in the execution of the method of Claim 1* (see Fig. 1, items 2, 3, or 5; Col. 4, lines 19-65; → all depict storage capable of storing program instructions).

**In regard to independent Claim 83, Masui discloses:**

- *A computer-readable medium for providing instructions for directing a processing unit to process text entered via a user interface into with a pointing device* (Title; Abstract; Figs. 1-2, 11; → a text input device and method is which enables efficient and high-speed input of texts in a pen-input computer. A pen-input computer has a liquid crystal display panel, ... a pressure-sensitive tablet and an input pen for performing input to a soft keyboard displayed on the liquid crystal display panel), *by*:
  - *(a) receiving a partial text entry* (Col. 10, lines 34-37; → initial screen, as shown in Fig. 12, if a soft key skF of "F", for example, is pressed by the input pen (arrow A), "F" is designated as a retrieval condition).



- (b) *obtaining a dynamically generated list of completion candidates from a dictionary based on the partial text entry* (Col. 10, lines 37-40; → when "F" is thus designated as a retrieval condition, a set of plural candidate words starting with "F" is displayed as a pull-down menu (*a pull-down or pop-up menu is considered a type or kind of list*) PDME on the screen DPY, as shown in Fig. 12. Both word and exemplary phrase dictionaries are made available to the system (see Fig. 1, Col. 4, lines 19-21);
- (c) *displaying the list of completion candidates in a search list within a graphical user interface* (Col. 10, lines 38-40; → ... a set of plural candidate words starting with "F" is displayed as a pull-down menu (*a pull-down or pop-up menu is considered a type or kind of list*) PDME on the screen DPY, as shown in Fig. 12);
- (d) *receiving a user input signal associated with the pointing device* (Col. 10, lines 46-50; → a desired candidate word is selected with a pointing device (e.g., a pen) from the candidate words displayed as the pull-down menu PDME. For example, if a menu key mkf of "first" is selected, the character "first" is determined, as shown in Fig. 13. The act of selecting with the pen is indicative of a type of input signal with the pointing device);
- (e) *if the user input signal corresponds to a first type of user selection with the pointing device, deactivating the search list* (Col. 10, lines 28-33; Fig. 11; → in the soft keyboard SKBE, alphabetical soft keys of "A" to "Z" (including symbolic characters "(" , ")" , "#", etc.), and general edit

command soft keys SKC including "Back Space", "Enter" and "Cancel" are provided. Also, Col. 11, lines 13-14;→ in the case where the determined text is to be corrected or erased, the edit command soft keys SKC are used. These two disclosures imply that a user can use such Edit keys to perform functions other than text entry. For example, and with functionality typical of mechanical keyboards used to enter/edit text on a typical computer display, a "Back Space" key would typically be used to delete previous characters. Thus, in the case of the soft keyboard, a user begins with the soft keyboard as shown in Fig. 11. Fig. 12 shows the result of entering the letter "F" with the pointing device by "tapping" the "F" virtual key. It is presumed, like in the mechanical keyboard case, that to remove the entry of the "F" key, a user would simply press the "Back Space", or perhaps the "Cancel" soft key and the display would revert back to that depicted in Fig. 11). Likewise, it is implied by the disclosures above of Masui that "tapping" the "Cancel" soft key in Fig. 12 would revert the display back to that of Fig. 11 (i.e., the pull-down or pop-up menu (list) would in effect be deactivated. Also see Col. 7, lines 56-62;→ candidate selected, list disappears);

- (f) if the user input signal corresponds to a second type of user selection with the pointing device, replacing the partial text entry with a completion candidate from the search list (Col. 10, lines 46-50; Fig. 19, ST11-ST12;→ a desired candidate word is selected with a pointing device (e.g., a pen)

from the candidate words displayed as the pull-down menu PDME. For example, if a menu key mkf of "first" is selected, the character "first" is determined, as shown in Fig. 13. The act of selecting with the pen is indicative of a type of input signal with the pointing device (*a second type of user selection*)); and

- (g) *if the user input signal corresponds to a third type of user selection with the pointing device, dynamically obtaining a refined list of completion candidates based on one of the completion candidates from the search list, displaying the refined list of completion candidates in the search list for further user selection, and monitoring for a further user input signal associated with the pointing device (Col. 8, lines 27-34; lines 48-56; line 62 through Col. 9 line 9; Figs. 4-9;→ based on the selection of a completion candidate (e.g., "ikani" as in Fig. 7), another set of completion candidates is produced. This set contains completion candidates that most frequently occur immediately after the previously chosen completion candidate. Thus, a refined list of completion candidates is offered and displayed based on the selection of an initial completion candidate from an initial list).*

**In regard to dependent Claim 105, Masui discloses:**

- *obtaining, for display in the search list, a second dynamically generated list of completion candidates based on the partial text entry, in response to modification of the partial text entry (see Fig. 19; → leading character is input (step ST1), at step ST10 there's an option to add additional characters. Step ST9 is the display step. Each time a character is entered, the completion candidate list is "refined" based on the current number of characters entered).*

**In regard to Claims 47-48, 49, 50, 51-52, 53-55, 56, and 106** Claims 47-48, 49, 50, 51-52, 53-55, 56, and 106 merely recite a system for performing the method of Claims 1-2, 15, 17, 18-19, 21-23, 30, and 105, respectively. Thus, Masui discloses every limitation of Claims 47-48, 49, 50, 51-52, 53-55, 56, and 106 as indicated in the above rejections for Claims 1-2, 15, 17, 18-19, 21-23, 30, and 105.

**In regard to Claims 84-85,** Claims 84-85 merely recite a system for performing the method of Claims 1 and 2, respectively. Thus, Masui discloses every limitation of Claims 84-85 as indicated in the above rejections for Claims 1 and 2.

**In regard to independent Claim 155, Masui discloses:**

- *A system of processing text entered into a personal computing device with a pointing device* (Title; Abstract; Figs. 1-2, 11; → a text input device and method is which enables efficient and high-speed input of texts in a pen-input computer. A pen-input computer has a liquid crystal display panel, ... a pressure-sensitive tablet and an input pen for performing input to a soft keyboard displayed on the liquid crystal display panel), *the system comprising*:
  - *(a) means for receiving a partial text entry comprising at least a first character* (Col. 10, lines 34-37; → initial screen, as shown in Fig. 12, if a soft key skF of "F", for example, is pressed by the input pen (arrow A), "F" is designated as a retrieval condition).
  - *(b) means for obtaining a first plurality of completion candidates in response to the receipt of the first character of the partial text entry* (Col. 10, lines 37-40; → when "F" is thus designated as a retrieval condition, a set of plural candidate words starting with "F" is displayed as a pull-down menu (a pull-down or pop-up menu is considered a type or kind of list) PDME on the screen DPY, as shown in Fig. 12);
  - *(c) means for displaying the first plurality of completion candidates in a search list* (Col. 10, lines 38-40; → ... a set of plural candidate words starting with "F" is displayed as a pull-down menu (a pull-down or pop-up

*menu is considered a type or kind of list) PDME on the screen DPY, as shown in Fig. 12);*

- *(d) means for receiving a user input signal associated with the pointing device (Col. 10, lines 46-50; → a desired candidate word is selected (with a pointing device; a pen) from the candidate words displayed as the pull-down menu PDME. For example, if a menu key mkf of "first" is selected, the character "first" is determined, as shown in Fig. 13. The act of selecting with the pen is indicative of a type of input signal with the pointing device);*
- *(e) means for modifying the partial text entry to become an accepted completion candidate, if the user input signal corresponds to accepting a completion candidate from the search list to replace the partial text entry (Col. 10, lines 46-50; Fig. 13; Fig. 19, steps ST11-ST12; → a desired candidate word is selected (thus modifying the initially entered "F") with a pointing device (e.g., a pen) from the candidate words displayed as the pull-down menu PDME. For example, if a menu key mkf of "first" is selected, the character "first" is determined, as shown in Fig. 13);*
- *(f) means for obtaining, if the user input signal corresponds to selecting a completion candidate from the search list to initiate further searching, a second plurality of completion candidates based on the selected completion candidate and displaying the second plurality of completion candidates in the search list for further selection (Col. 8, lines 27-34; lines*

48-56; line 62 through Col. 9 line 9; Figs. 4-8;→ based on the selection of a completion candidate (e.g., "ikani" as in Fig. 7), another set of completion candidates is produced. This set contains completion candidates that most frequently occur immediately after the previously chosen completion candidate. Thus, a refined list of completion candidates is offered and displayed based on the selection of an initial completion candidate from an initial list).

**In regard to dependent Claim 160, Masui discloses:**

Limitations (a)-(c) listed below merely reflect a repetition of steps (d)-(f) in Claim 155. Since Masui has been shown to disclose limitations (d)-(f) of Claim 155 (see rejection), Masui also discloses limitations (a)-(c) listed below. Thus,

- *(a) means for receiving a new user input signal associated with the pointing device (Col. 10, lines 46-50;→ a desired candidate word is selected (with a pointing device; a pen) from the candidate words displayed as the pull-down menu PDME. For example, if a menu key mkf of "first" is selected, the character "first" is determined, as shown in Fig. 13. The act of selecting with the pen is indicative of a type of input signal with the pointing device);*
- *(b) means for modifying the partial text entry to become the accepted completion candidate from the second plurality of completion candidates displayed in the search list if the new user input signal corresponds to accepting a completion candidate from the second plurality of completion candidates displayed in the*

*search list to replace the partial text entry* (Col. 10, lines 46-50; Fig. 13; Fig. 19, steps ST11-ST12;→ a desired candidate word is selected (thus modifying the initially entered "F") with a pointing device (e.g., a pen) from the candidate words displayed as the pull-down menu PDME. For example, if a menu key mkf of "first" is selected, the character "first" is determined, as shown in Fig. 13); and

- *(c) means for obtaining a further plurality of completion candidates based on the selected completion candidate and displaying the further plurality of completion candidates in the search list for further selection if the new user input signal corresponds to selecting a completion candidate from the second plurality of completion candidates displayed in the search list to initiate further searching* (Col. 8, lines 27-34; lines 48-56; line 62 through Col. 9 line 9; Figs. 4-8;→ based on the selection of a completion candidate (e.g., "ikani" as in Fig. 7), another set of completion candidates is produced. This set contains completion candidates that most frequently occur immediately after the previously chosen completion candidate. Thus, a refined list of completion candidates is offered and displayed based on the selection of an initial completion candidate from an initial list).

**In regard to dependent Claim 163**, Claim 163 merely recites a system for performing the method of Claim 23. Thus, Masui discloses every limitation of Claim 163 as indicated in the above rejection for Claim 23.



**In regard to dependent Claim 164**, Claim 164 merely duplicates the limitations found in Claim 160, and is rejected along the same line of reasoning to that of Claim 160 above.

**In regard to dependent Claim 171**, Masui discloses:

- *(a) means for displaying a digital keyboard in a graphical user interface (see Figs. 3-14; → digital keyboards configured for Japanese (e.g., hiragana) and English character entry);*
- *(b) means for receiving at least part of the partial text entry via the digital keyboard (see Figs. 7, 9, 11, 13-14; → digital keyboards displaying completion candidates and also depicting the selection of a completion candidate);*
- *(c) means for modifying the partial text entry via any of the digital keyboard and the search list (See Figs. 4-5, and 6; → in this example, the sequence from either of Figs. 4-5 to Fig. 6, depicts how the partial text entry can be modified using a “dragging” technique. Fig. 4 shows selection of the character “I”, and a first set of completion candidates. Fig. 6 then shows selection, by dragging, of the key designated with the letters “KA”. The list of completion candidates is modified to reflect a previous selection of the letter “I” with the addition of the letters “KA”. See also Col. 8, lines 1-10; → discusses the “dragging” scenario).*

**In regard to dependent Claim 172, Masui discloses:**

- *means for displaying simultaneously the digital keyboard and the search list (see Figs. 4-10, 12-14; → depict the simultaneous display of a digital keyboard and a search list of completion candidates).*

**In regard to dependent Claim 173, Masui discloses:**

- *means for obtaining a modified set of completion candidates that begin with the partial text entry as the partial text entry is modified (see Fig. 19; → leading character is input (step ST1), at step ST10 there's an option to add additional characters. Step ST9 is the display step. Each time a character is entered, the completion candidate list is "refined" based on the current number of characters entered).*

**In regard to dependent Claim 174, Masui discloses:**

- *means for receiving at least the first character of the partial text entry via a digital keyboard displayed in a graphical user interface (Col. 10, lines 34-37; → initial screen, as shown in Fig. 12, if a soft key skF of "F", for example, is pressed by the input pen (arrow A), "F" is designated as a retrieval condition (reading)); and*
- *(b) means for displaying simultaneously the search list and the digital keyboard in the graphical user interface when the partial text entry comprises at least the first*

*character* (see Figs. 4-10, 12-14;→ depict the simultaneous display of a digital keyboard and a search list of completion candidates).

**In regard to dependent Claim 176, Masui discloses:**

- *means for displaying a digital keyboard for generating at least part of the partial text entry* (Figs. 2, 32;→ a portable computing device (e.g., a PDA) for displaying, among other user interface components a digital keyboard, which, displays a digital keyboard (e.g., Figs. 3-14) and, when used with a pen or stylus (pointing device), allows a user to enter characters and obtain completion candidates based on that character entry).

**In regard to dependent Claim 177, Masui discloses:**

- *means for modifying the partial text entry via any of the digital keyboard and the search list* (see Fig. 19;→ leading character is input (step ST1), at step ST10 there's an option to add additional characters. Step ST9 is the display step. Each time a character is entered, the completion candidate list is "refined" based on the current number of characters entered).

**In regard to dependent Claim 178, Masui discloses:**

- *means for displaying simultaneously both the digital keyboard and the search list* (see Figs. 4-10, 12-14;→ depict the simultaneous display of a digital keyboard and a search list of completion candidates).

**In regard to dependent Claim 179, Masui discloses:**

- *means for obtaining a modified set of completion candidates that begin with the partial text entry as the partial text entry is modified* (see Fig. 19; → leading character is input (step ST1), at step ST10 there's an option to add additional characters. Step ST9 is the display step. Each time a character is entered, the completion candidate list is "refined" based on the current number of characters entered).

**In regard to dependent Claim 180, Masui discloses:**

- *means for displaying simultaneously the digital keyboard and the search list in a user interface while the digital keyboard is in use* (see Figs. 4-10, 12-14; → depict the simultaneous display of a digital keyboard and a search list of completion candidates. Also, Figures depict interaction with the digital keyboard with a pen or pointing device to select characters or to select completion candidates).

**In regard to Claim 189,** Claim 189 merely recites a computer-readable medium comprising codes for directing a processing unit to execute the method of Claim 1.

Thus, Masui discloses every limitation of Claim 189 as indicated in the above rejection for Claim 1.

19. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Masui in view of PalmOS ("PalmPilot Handbook", copyright 1997 3Com, Pgs. 37-39, downloaded from <<http://www.palm.com/us/support/handbooks/palmpilothb.pdf>>).

**In regard to dependent Claim 25, Masui discloses:**

- *at least part of the partial text entry is received via a digital keyboard (Col. 10, lines 25-50; → soft key "F" selected resulting in the generation of completion candidates);*

Masui fails to expressly disclose:

- *the method further comprising
  - *swapping between displaying one digital keyboard layout and at least one other digital keyboard layout in response to user input.**

However, PalmOS discloses (Pg. 39, Figures; → allows a user to change keyboard layouts whenever they needed to enter a number, or a special character (international character).

It would have been obvious to one of ordinary skill in the art at the time of invention to combine the disclosures of Masui and PalmOS because both references are related to keyboard input via a digital or virtual keyboard. Adding the disclosure of PalmOS provides the user with a way to select between character sets within a single user interface thereby saving screen space.

***Response to Arguments***

20. Applicant's arguments with respect to claims 1, 9, 14-21, 23-25, 30-33, 38-46, 49-53, 55-56, 84, and 105-106 have been considered but are moot in view of the new ground(s) of rejection.

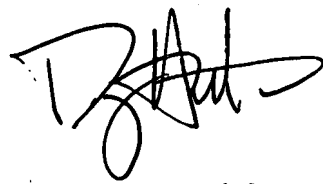
***Conclusion***

21. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James H. Blackwell whose telephone number is 571-272-4089. The examiner can normally be reached on Mon-Fri.

22. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Heather R. Herndon can be reached on 571-272-4136. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

23. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

James H. Blackwell  
05/30/2007



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